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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 0000053806	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/08397	International filing date (day/month/year) 30.07.2003	Priority date (day/month/year) 01.08.2002
International Patent Classification (IPC) or both national classification and IPC C07D263/52		
Applicant BASF AKTIENGESELLSCHAFT et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 14.01.2004	Date of completion of this report 27.10.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer vanVoorsttotVoorst,M Telephone No. +49 89 2399-8280 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/EP 03/08397**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-115 as originally filed

Claims, Numbers

1-16 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 10,12,14

because:

☒ the said international application, or the said claims Nos. 10,12,14 relate to the following subject matter which does not require an international preliminary examination (specify):

see separate sheet

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-16
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-16
Industrial applicability (IA)	Yes: Claims	1-9,11,13,15,16
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

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AD SECTION III:

1. For the assessment of the present claim 14 on the question whether it is industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment. Claim 14 relates to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of this claim (Article 34(4)(a)(i) PCT).

As the application relates not only to the use of the compounds in crop protection but also to their use in treating, curing, ..., protecting warm-blooded animals and fish claims 10 and 12 should be formulated such as to comply with the requirements of Article 34(4)(i)PCT, accordingly no opinion regarding industrial applicability is made for these claims.

AD SECTION V:

1. The following documents are considered,
D1: WO 86 07590 A (FMC CORP) 31 December 1986 (1986-12-31) cited in the application
D2: WO 97 08130 A (BAYER AG ;MONSANTO CO (US); KRAATZ UDO (DE); ANDERSCH WOLFRAM (DE)) 6 March 1997 (1997-03-06) cited in the application
D3: EP-A-1 000 946 (AMERICAN CYANAMID CO) 17 May 2000 (2000-05-17) cited in the application
D4: DE 38 16 807 A (SCHERING AG) 23 November 1989 (1989-11-23)
D5: DE 38 24 879 A (SCHERING AG) 15 February 1990 (1990-02-15)
D6: GB-A-2 294 928 (BAYER AG) 15 May 1996 (1996-05-15).
2. Having regard to the prior art cited in the Search Report, the subject-matter claimed appears to be novel.
The present compounds differ from the structurally closest compounds disclosed in D1, when X is oxygen, R is C(O)R¹ and R¹ is dihydrothiazolythiomethyl on account of the fact that Het represents a mono- or bicyclic **heteroaromatic** ring system.

There exists a certain overlap between the compounds claimed and the compounds disclosed in D2, when Q represents ZR^9 , wherein Z is an aliphatic group, R^9 is SR^{12} and R^{12} is a heterocyclic group, and the compounds disclosed in D3, when Q is an alkyl group substituted with CO_2R_2 and R_2 represents haloalkenyl. However, the present subject-matter is considered to represent a novel selection.

The compounds disclosed in D4 and D5 do not have the terminal fluoroalkene group, and the D6 compounds are thiadiazol-5-yl-oxy derivatives.

Having regard to the above it appears that the subject-matter according to claims 1-16 meets the requirements of Article 33(2) PCT.

3. Closest prior art comprises the compounds disclosed in D1 to D6, which possess similar properties as the present derivatives.

The problem to be solved was to provide pesticidal compounds having improved nematocidal, insecticidal and acaricidal activities and also to provide compounds for controlling harmful fungi, unwanted plants and parasites, cf page 3, lines 32-35 of the description.

The Applicant has shown these activities on pages 113-115 of the description, however, having regard to the teaching of the prior art, it is considered that the skilled person would have expected these properties from the compounds claimed, cf in particular Example 23 of D1, Examples 4-6 of D3 and Examples 3 and 5 of D4.

Whether or not the structural modifications of the state of the art are associated with an improvement at all is a fundamental aspect of inventive step. Unless evidence refutes the assumption that the small modifications made are not unexpectedly associated with a significant improvement in the property relevant to the solution of the stated problem, the presumption prevails that the compounds represent only predictable effects and are therefore obvious. The solution of the problem of merely providing further compounds showing pesticidal activities does not involve an inventive step.

Accordingly, an inventive step as required by Article 33(3) PCT cannot be acknowledged as it has not yet been shown by appropriate information, e.g. by experimental data, that the subject-matter claimed includes any unexpected or surprising effects on which an inventive step could be based.

4. No objections with regard to Article 33(4) PCT arise for claims 1-9, 11, 13, 15 and 16, however, see Section III above.